

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 Claims 1-6. (canceled).

1 7. (currently amended) An iris camera module ~~according to~~
2 ~~claim 6~~, comprising:

3 an image pickup optical system for picking up an image of
4 the iris;

5 a target optical system for displaying a target for the
6 eye; and

7 a target screen where the target is displayed, wherein
8 the target optical system and the image pickup optical

9 system are integrated into a single unit, and

10 wherein

11 the image pickup optical system includes:

12 an infrared illuminating section for irradiating an
13 infrared ray onto the eye,

14 an image pickup section for picking up the image of

15 the iris by detecting the infrared ray reflected

16 on the eye, and

17 an image pickup optical section for guiding the

18 infrared ray reflected on the eye to the image

19 pickup section; and

20 wherein the target optical system includes a target

21 optical section for guiding the image of the target

22 on the target screen to the eye; and further

23 wherein

24 the image pickup section includes:

25 an image pickup element for picking up the image of

26 the iris,

27 a storage for storing a reference iris information,
28 and
29 a comparator section for comparing an information
30 based on the image of the iris picked up by the
31 image pickup section with the reference iris
32 information to output the comparison result as
33 to whether matching is obtained; and
34 wherein the reference iris information can be overwritten
35 only a predetermined number of times in the storage.

1 Claim 8 (canceled).

1 9. (previously presented) An iris camera module
2 comprising:
3 an image pickup optical system for picking up an image of
4 the iris of a user; and
5 a target optical system including a target screen for
6 displaying a target for aligning the eye of the
7 user, wherein the target optical system and the
8 image pickup optical system are integrated onto a
9 common substrate.

1 10. (previously presented) An iris camera module
2 according to claim 9, wherein the image pickup optical system
3 includes:
4 an infrared illuminating section for irradiating an
5 infrared ray onto the eye;
6 an image pickup section for picking up the image of the
7 iris by detecting the infrared ray reflected on the
8 eye; and
9 an image pickup optical section for guiding the infrared
10 ray reflected on the eye to the image pickup
11 section,
12 and further wherein the target optical system includes:

13 a target optical section for guiding the image of
14 the target on the target screen to the eye.

1 11. (previously presented) An iris camera module
2 according to claim 10, wherein the image pickup optical
3 section and the target optical section include a common half
4 mirror for reflecting to guide the infrared ray reflected on
5 the eye to the image pickup section and guiding the image of
6 the target on the target screen to the eye without reflecting
7 the image.

1 12. (previously presented) An iris camera module
2 according to claim 10, wherein the image pickup optical
3 section and the target optical section include a common half
4 mirror for guiding the infrared ray reflected on the eye to
5 the image pickup section without reflecting the infrared ray
6 and reflecting to guide the image of the target on the target
7 screen to the eye.

1 13. (previously presented) An iris camera module
2 according to claim 9, wherein the target optical system
3 includes a screen illuminating section for illuminating the
4 target screen.

1 14. (previously presented) An iris camera module
2 according to claim 10, wherein the image pickup section
3 further includes:
4 an image pickup element for picking up the image of the
5 iris;
6 a storage for storing a reference iris information; and
7 a comparator section for comparing an information based
8 on the image of the iris picked up by the image
9 pickup section with the reference iris information

10 to output the comparison result as to whether
11 matching is obtained.

1 15. (previously presented) An iris camera module
2 according to claim 14, wherein the reference iris information
3 can be overwritten only a predetermined number of times in the
4 storage.

1 16. (previously presented) An iris camera module
2 according to claim 10, wherein the image pickup section
3 further includes:
4 an image pickup element for picking up the image of the
5 iris; and
6 a connector section for coupling an external circuit
7 detachable from the image pickup section,
8 and wherein the external circuit includes:
9 a storage for storing a reference iris information; and
10 a comparator section for comparing an information based
11 on the iris picked up by the image pickup section
12 with the reference iris information to output the
13 comparison result as to whether matching is
14 obtained.

1 17. (previously presented) An iris camera module
2 comprising:
3 an image pickup optical system for picking up an image of
4 the iris of a user;
5 a target optical system for displaying a target for
6 aligning the eye of the user;
7 a storage for storing a reference iris information; and
8 a comparator section for comparing an information based
9 on the image of the iris picked up by the image
10 pickup section with the reference iris information

11 to output the comparison result as to whether
12 matching is obtained, wherein
13 the reference iris information can be overwritten only a
14 predetermined number of times in the storage.

1 Claim 18. (canceled).

1 19. (previously presented) An iris camera module
2 comprising:
3 an image pickup optical system for picking up an image of
4 the iris of a user, said image optical system
5 including:
6 an illuminating section for irradiating a ray onto
7 the eye;
8 an image pickup section for picking up the image of
9 the iris by detecting the ray reflected on the
10 eye; and
11 an image pickup optical section for guiding the ray
12 reflected on the eye to the image pickup
13 section;
14 a target optical system for displaying a target for
15 aligning the eye of the user, said target optical
16 system including:
17 a target screen;
18 a target optical section for guiding the image of
19 the target on the target screen to the eye; and
20 a screen illuminating section for illuminating the
21 target screen with either ambient light or
22 artificial light;
23 a storage for storing a reference iris information; and
24 a comparator section for comparing an information based
25 on the image of the iris picked up by the image
26 pickup section with the reference iris information

27 to output the comparison result as to whether
28 matching is obtained, wherein
29 the reference iris information can be overwritten only a
30 predetermined number of times in the storage.

1 20. (previously presented) An iris camera module
2 according to claim 19, wherein the image pickup optical
3 section and the target optical section include a common half
4 mirror for reflecting to guide the infrared ray reflected on
5 the eye to the image pickup section and guiding the image of
6 the target on the target screen to the eye without reflecting
7 the image.

1 21. (previously presented) An iris camera module
2 according to claim 19, wherein the image pickup optical
3 section and the target optical section include a common half
4 mirror for guiding the infrared ray reflected on the eye to
5 the image pickup section without reflecting the infrared ray
6 and reflecting to guide the image of the target on the target
7 screen to the eye.

1 Claims 22-38 (deleted).